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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,260	04/23/2001	Michael A. Farrar	20686	3234

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EXAMINER

LUKTON, DAVID

ART UNIT	PAPER NUMBER
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1653

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/840,260

Applicant(s)

FARRAR ET AL.

Examiner

David Lukton

Art Unit

1653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-26 and 28 is/are pending in the application.
- 4a) Of the above claim(s) 15-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-14 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Pursuant to the directives of the response filed 10/25/04, claims 3 and 4 have been amended, and claims 2 and 27 cancelled. The response states that claims 15-26 have been cancelled. However, they are presented as still pending on the claims list. Accordingly, claims 1, 3-26 and 28 are regarded as pending. Claims 15-26 remain withdrawn from consideration. Claims 1, 3-14, 28 are examined in this Office action.

With regard to the method claims, it is suggested that applicants do one of the following: (a) cancel claims 15-26, or (b) amend the method claims to exclude the methylpyrrole group that is disclosed in the prior art. Rejoining is not required if the scope of the compounds (to which the method claims are drawn) is broader than the scope of the claims that has been found to be allowable.



Claims 1, 3-14, 28 are rejected under 35 U.S.C. §112 second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- In claim 1, applicants have attempted to exclude methylpyrrole as the linking group. However, a hydrogen atom is missing from the structure.
- In claim 4, a hydrogen atom is missing from the pyrrole nitrogen atom in several cases. (See also claims 17, 18 and 21)
- In claim 4, the phrase "the pyrrole moiety" lacks antecedent basis. (In amending the claims, note that the term "pyrrole" has a very specific meaning and does not include

substituted pyrrole).

- In claim 5, a hydrogen atom is missing from the biphenylamine structure. (See also claims 17, 18 and 21)
- In claim 5, the phrase "the diaryl moiety" lacks antecedent basis.
- In claim 6, the phrase "the pyridinyl moiety" lacks antecedent basis.
- In claim 8, the phrase "the indolyl moiety" lacks antecedent basis.
- In claim 9, the phrase "the benzofuranyl moiety" lacks antecedent basis.
- In claim 10, the phrase "the phenyl moiety" lacks antecedent basis.
- In claim 11, the phrase "the cycloalkyl moiety" lacks antecedent basis.
- In claim 12, the phrase "the furanyl moiety" lacks antecedent basis.
- In claim 13, the phrase "the benzofuranyl moiety" lacks antecedent basis.
- In claim 7, there is a minor grammatical error. This could be rectified, e.g., by reciting: *moiety which contains*.
- In claim 8, a hydrogen atom is missing from the indole nitrogen atoms. (See also claims 17, 18 and 21)
- In claim 28, the substituent variables are not defined.



The following is a quotation of the appropriate paragraphs of 35 U.S.C. §102 that form the basis for the rejections under this section made in this action.

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 28 are rejected under 35 U.S.C. §102(b) as being anticipated by Laurin (*Bioorg Med Chem. Lett.* **9**, 2079, 1999).

As indicated previously, Laurin discloses a compound that falls within the scope of claim 1 wherein "X" is methylpyrrole.

In response, applicants have attempted to exclude methylpyrrole as the linking group. However, there are two reasons why this amendment is not effective to overcome this rejection. The first reason is that a hydrogen atom is missing from the methylpyrrole structure that is being excluded. Therefore, the attempted exclusion is not effective to overcome this rejection, since Laurin discloses a compound in which a hydrogen atom is present on the pyrrole nitrogen atom. The second reason why the amendment is not effective to overcome this rejection pertains to the fact that what is being excluded (even assuming that the requisite hydrogen atom were present) is a heteroaryl group that is methylpyrrole. Consider again the claim language:

"X is ...heteroaryl...[which is] optionally substituted with 1-3 groups of C₁₋₆ alkyl".

That is, the claim draws a distinction between heteroaryl and substituted heteraryl.

The relevant phrase from claim 1 can be paraphrased as follows:

X is selected from the group consisting of heteroaryl and alkyl-substituted heteroaryl, with the proviso that when X is heteroaryl (as opposed to alkyl-substituted heteroaryl), methylpyrrole is excluded.

Thus, the rejection can be maintained because (apart from the matter of the missing hydrogen atom) the exclusion only pertains to the case of "X" being heteroaryl, and requires no exclusions when "X" is substituted heteroaryl. Since the reference discloses a compound in which X is substituted heteroaryl, the exclusion in the claim does not apply.

Justification for rejection of claim 28 is unrelated to either of the foregoing issues. In claim 28, none of the substituent variables is defined, and so nothing is excluded.

The claims are anticipated.



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It is noted that in claim 15, important process steps are missing. It is suggested that this claim be amended to make it clear exactly how one would go about dimerizing the proteins in question.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lukton whose telephone number is 571-272-0952. The examiner can normally be reached Monday-Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon Weber, can be reached at 571-272-0925. The fax number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.



DAVID LUKTON
PATENT EXAMINER
GROUP 1653